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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,609	08/15/2001	Stephen John Lee	BE7344PCT	9900

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EXAMINER

KASTLER, SCOTT R

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 09/08/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/856,609

Applicant(s)

LEE, STEPHEN JOHN

Examiner

Scott Kastler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Hind. Hind teaches, in the embodiment of figure 2 for example, a refractory device for the teeming of molten metal including a ceramic pouring tube (25) within a metallic can (16, 17) which further encapsulates an additional ceramic supporting element (14), and a ceramic mortar, or paste which is frittable(15) in an interface zone between the pouring tube element (25) and the support element (14), where the mortar (15) is not exposed to the molten metal poured through the pouring tube element (25), is to some extent deformable at elevated temperatures (above 700 degrees C) and is structurally solid at lower temperatures (below 700 degrees C) thereby meeting the broad definition of a pyroplastic ceramic material, and where the support element (14) is fully encapsulated within the metallic can (16, 17) where the profiles of each of the elements provide corresponding interfaces, thereby showing all aspects of the above claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hind in view of EP' 164. As applied to claim 1 above, Hind shows all aspects of the above claims except the specific recitation that the mortar (15) is a pyroplastic ceramic material, although as stated above, the mortar of King does meet the broad definition of a pyroplastic ceramic material. EP' 164 teaches that pyroplastic ceramic materials (11) for use as refractory mortars for the purpose of sealing gaps between refractory components in a molten metal teeming arrangement is well known in the molten metal dispensing arts. Because Hind broadly requires a refractory sealing material (15) for sealing gaps between refractory components in a molten metal dispensing device, and EP' 164 teaches an improved sealing material for the sealing of gaps between refractory components in a molten metal dispensing device, motivation to employ the improved sealing composition of EP' 164 as the required refractory sealing material (15) of Hind, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

Applicant's arguments filed on 7-17-2003 have been fully considered but they are not persuasive. Applicant's argument that Hind does not disclose a refractory device including a shock absorbing interface zone because the refractory cement (15) is not "deformable" is not persuasive. As stated in the above rejections, neither the instant specification or the claims give any clear and definite recitation as to what extent a material must be able to deform in order to be

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considered “deformable” (the recitation in the specification that the zone must be deformable enough to provide a buffer against sudden thermal stresses does not render any specific limits to the term deformable since the cement of Hind would also provide a buffer against some thermal stresses); since all materials are to at least some small extent deformable, the cement of Hind also meets the requirement that it be deformable.

Applicant’s further argument that the cement (15) of Hind is not “encapsulated” is not persuasive because the cement (15) of Hind is encapsulated at least to substantially the same extent as the shock absorbing zones (13) in instant figure 6 and zone (24) in figure 7, both of which are said to be encapsulated, where the zones are open at least on their upper faces.

Finally, it is noted that the applicant did not specifically argue the position by the examiner that EP’164 discloses the use of a pyroplastic and deformable material as a refractory mortar, or that the refractory mortar of EP’164 could be properly substituted for the mortar of Hind to render the instant claims obvious over the combination of these two references. Therefore, the rejection of all of the instant claims as being obvious over this combination of references has been maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

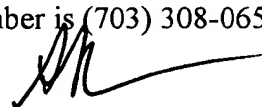
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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (703) 308-2506. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-3050. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



Scott Kastler
Primary Examiner
Art Unit 1742

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